TABLE 3. Continued

1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
					Base Case					
1,326	1,526	1,874	1,201	1,169	2,165	2,499	2,851	2,736	3,060	3,189
1,115	1,114	1,224	1,306	1,512	1,792	1,392	2,613	2,365	2,631	2,896
211	412	650	-104	-343	373	1,108	238	371	429	293
219	282	400	627	763	852	870	1,113	1,218	1,268	1,280
430	694	1,050	522	420	1,225	1,977	1,352	1,589	1,698	1,573
3,267	3,697	4,392	5,442	5,964	6,385	7,609	9,586	10,938	12,527	14,225
430	694	1,050	522	420	1,225	1,977	1,352	1,589	1,698	1,573
3,697	4,392	5,442	5,964	6,385	7,609	9,586	10,938	12,527	14,225	15,797
1,413	1,598	1,640	1,705	1,793	2,795	3,431	4,558	4,750	4,376	5,285
2,284	2,794	3,802	4,259	4,591	4,814	6,155	6,381	7,777	9,848	10,512
1,663	1,736	1,913	1,853	1,380	1,612	2,454	1,681	2,334	2,293	2,324
60	61	61	59	48	47	64	39	50	47	45
					Full Funding of FAA					
1,326	1,526	1,874	1,201	1,169	2,165	2,499	2,851	2,736	3,060	3,189
2,366	2,433	2,644	2,694	2,572	2,624	3,368	3,466	3,988	4,249	4,405
-1,040	-907	-771	-1,493	-1,403	-459	-868	-615	-1,252	-1,189	-1,216
0	0	0	0	0	0	0	0	0	0	0
-1,040	-907	-771	-1,493	-1,403	-459	-868	-615	-1,252	-1,189	-1,216
-4,950	-5,990	-6,897	-7,668	-9,160	-10,563	-11,022	-11,891	-12,505	-13,758	-14,947
-1,040	-907	-771	-1,493	-1,403	-459	-868	-615	-1,252	-1,189	-1,216
-5,990	-6,897	-7,668	-9,160	-10,563	-11,022	-11,891	-12,505	-13,758	-14,947	-16,163
1,413	1,598	1,640	1,705	1,793	2,795	3,431	4,558	4,750	4,376	5,285
-7,403	-8,495	-9,307	-10,865	-12,357	-13,818	-15,321	-17,063	-18,508	-19,323	-21,448
412	416	492	464	320	780	478	828	711	675	815
15	15	16	15	11	23	13	19	15	14	16

d. Includes transfers of unexpended general fund appropriations of $621 million in 1971 and $255 million in 1972.

e. The general fund share of FAA spending is not part of the trust fund, but is included here for comparison with trust fund outlays.

f. These percentages do not always equal 15 percent since they are based on outlays, while the share of FAA spending assigned to the public sector is based on budget authority (obligation limits for airport grants).

Trust fund outlays for 1972 and 1973 are reduced by the amount of the general fund transfers received in those years that were intended to finance FAA operations spending ($647 million and $73 million respectively). In 1972, all FAA operations outlays were paid from the trust fund and a transfer from the general fund covered a portion of that spending. Both the transfer and the outlays are removed from the trust fund figures since they were actually a general fund expense. A similar though much smaller amount of general fund operations financing was channeled through the trust fund in 1973 and is also removed. For both years, these amounts are included in the entries for the general fund share of FAA spending. Finally, the transfers of unexpended general fund appropriations in 1971 and 1972 are retained but are included in the line for the change in cash instead of in tax revenue.

The base case, therefore, includes all of the excise taxes paid by aviation users, all of the outlays actually funded by those taxes, the actual cash balance and interest earned on it through 1980, and higher, calculated cash balances and interest income from 1981 through 1988 that reflect the additional tax revenue of 1981 and 1982.

The base case presents the financial history of the trust fund in a very favorable light. It accounts for all aviation excise tax revenue supplied by private-sector users, and for the interest income these taxes would have produced, yielding large jumps in the cash and uncommitted balances of $4.7 billion by 1988. This amount represents an increase of over 80 percent in the current accumulated surplus. The result is a cash balance of $15.8 billion at the end of 1988 and an uncommitted balance of $10.5 billion.

TRUST FUND BALANCES WITH CAPITAL-ONLY FINANCING

Since the trust fund was established in 1971, it has financed all capital spending by the FAA and, in addition, has funded some of the operating costs of the FAA as well. If the trust fund had been used as a method of accounting for only capital spending, therefore, outlays from the trust fund would have been lower and the unexpended and uncommitted balances would have been higher. This is especially the case in the last 10 years, when the trust fund has financed substantially more of the FAA's operations spending than it did in its early years.

If the trust fund had financed only capital spending, its outlays would have been $7.2 billion lower than in the base case. The interest income of the trust fund and the unexpended balances would therefore have been much higher. The total increase in interest income for the period would have been $6.3 billion and the unexpended balance would have totaled $29.2 billion at the end of 1988, an increase of 85 percent over the base case. Since commitments against the cash balance would not have changed from the base case, the $13.5 billion increase in the unexpended balance would have translated into the same increase in the uncommitted balance. This accumulated surplus would, therefore, have been $24 billion by the end of 1988, or more than double the balance in the base case.

The large cash balance in this approach represents the excess of tax revenue over capital outlays plus the interest earnings on these excess balances. From a user's perspective, this calculation, less commitments, best represents the user subsidy of general fund spending since the interest earnings represent value to the general fund in borrowing these revenues. An alternative method, which ignores the value of loaning these tax revenues to the general fund, is to calculate just the excess of tax revenue over capital outlays since the beginning of the trust fund. This total net income before interest equals $12.1 billion by the end of 1988. This figure represents the excess taxes that need not have been collected if aviation excise taxes had been earmarked only for aviation capital spending.

TRUST FUND BALANCES WITH FULL USER FINANCING

An alternative calculation of the trust fund balances can be constructed from the base case by charging to the trust fund additional FAA spending that actually was financed from the general fund. This full funding case is shown in the bottom section of Table 3. The tax revenue line is identical to that in the base case, and trust fund outlays reflect an 85 percent trust fund share of FAA spending in each year.

The effect of charging more of the aviation system's costs to private-sector users is quite apparent, with outlays reaching double and triple their base levels in some years. Overall, the average increase for each year is about 93 percent. The total increase in trust fund outlays with full funding is $22.6 billion.

Net income before interest is negative in each year, and the gap between tax revenue and outlays is large. As a result, the cash balance becomes negative in 1973, and no interest is earned throughout the period. The loss in interest earnings compared with the base case is $9.4 billion. The interest and outlay effects combined reduce the unexpended balance by $32 billion at the end of 1988, going from $15.8 billion in the base case to -$16.2 billion. The uncommitted balance becomes an accumulated deficit of $21.4 billion by the end of 1988. In fact, the uncommitted balance is in deficit throughout the period, just the opposite of the base case where it is positive and growing nearly continuously after 1974.

Two points need to be made about these recalculations of the trust fund balances. First, while they yield negative cash balances in the trust fund, the Congress most likely would have changed either trust fund financing or spending to eliminate the funding shortfall. If users had been required to cover the full, private-sector share of aviation spending since 1971, aviation excise taxes would have had to be raised.

The second point is the asymmetry in the treatment of interest in these exercises. Though the cash balance becomes negative early in the period, no interest is charged to the trust fund for the shortfall in funds to cover spending. Just as the general fund has paid interest to the trust fund on its balances (balances loaned to the general fund), one could hypothesize an interest charge on general fund loans to cover the shortfall in trust fund financing of aviation programs. If the trust fund was debited with interest for borrowing to fund the cash balance shortfalls, the large negative unexpended and uncommitted balances would balloon to much higher levels.

Both of these points arise because the recalculations are intended only to illustrate the effect on the trust fund of higher user funding of the system's cost. Had the Congress required greater user financing of the system, it would doubtless have made some tax or program changes to avoid deficits in the trust fund.

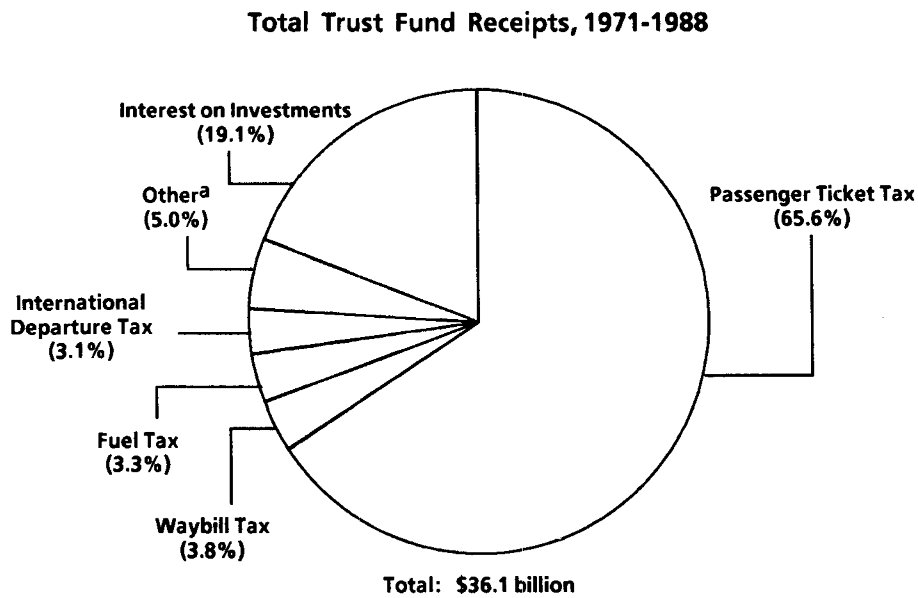
Figure 1 summarizes total trust fund receipts and FAA outlays from the start of the trust fund. FAA outlays are allocated according to the source and use of funds. Total trust fund receipts include interest income and general fund transfers as well as tax revenue, so these percentages differ from those above that pertain only to tax revenue.

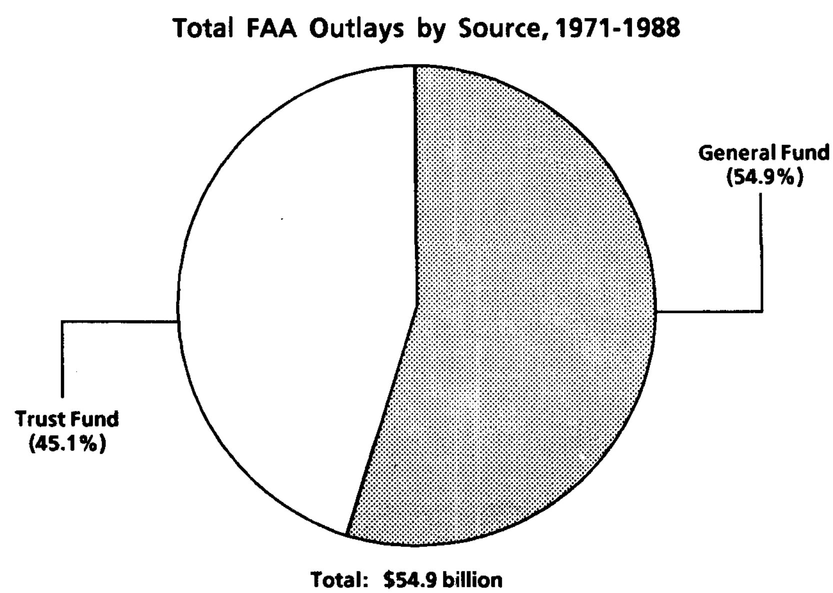
CONCLUSION

The current accumulated surplus in the aviation trust fund is illusory. While this surplus appears to indicate that private-sector users have paid more in taxes than they have received in services, the opposite is, in fact, the case. The uncommitted balance in the trust fund has developed, ironically, because private-sector users of the aviation system have received more in capital and operating spending than they have paid in taxes.

As shown in the capital-only analysis, the accumulated surplus underrepresents the balance that would exist if the trust fund had not financed some of the FAA's operations spending. The tax revenue paid by users in excess of capital spending could be considered, from this viewpoint, as a subsidy of the general fund by the trust fund. Users of the aviation system have, nevertheless, received aviation services far beyond those represented by capital expenditures alone. In fact, as shown in the full-funding analysis, users of the aviation system have received aviation services far in excess of their tax payments. From the viewpoint of those who believe the trust fund should be financed as a full user-pay system, current trust fund balances fail to account for all the aviation spending that private-sector users would have to fund if they were to cover the full costs they impose on the aviation system. Public-sector financing of this part of the private-sector share of FAA spending could be considered a subsidy of the trust fund by the general fund. Alternatively, the subsidy of private-sector users by the general fund can be considered the difference between aviation excise tax revenue and the private-sector share of FAA spending.

Figure 1.
Total Trust Fund Receipts and FAA Outlays, 1971-1988



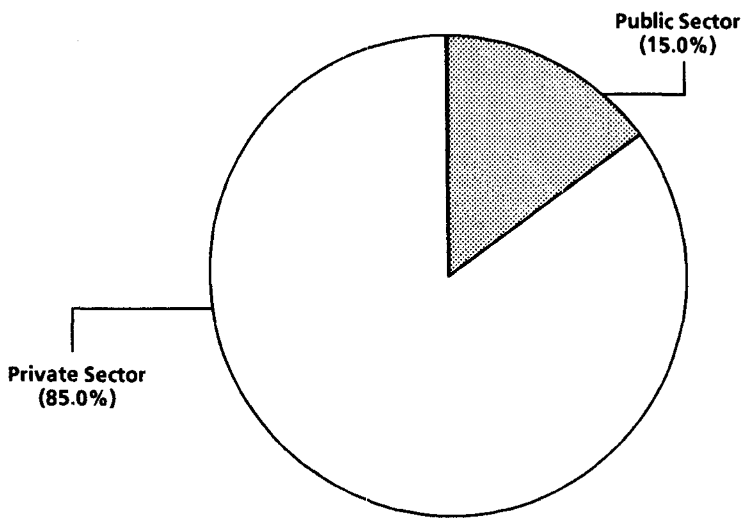


SOURCE: Congressional Budget Office from federal budget data.

a. Other includes transfers from the general fund in 1971-1973, discountinued taxes, and refunds.

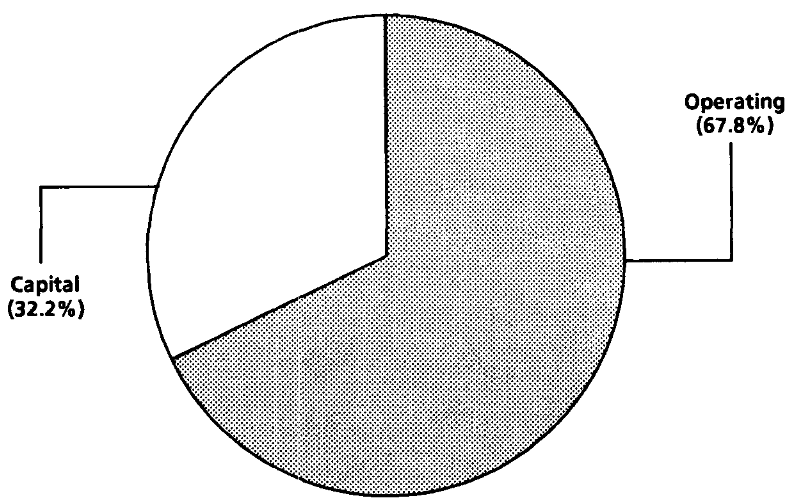
Figure 1.
Continued

Total FAA Outlays by Share, 1971-1988



Total: $54.9 billion

Total FAA Outlays by Share, 1971-1988



Total: $54.9 billion

Finally, it is misleading to conclude that the current congestion and capacity constraints in the aviation system are the result of trust fund surpluses. While federal investment in the aviation infrastructure may have been insufficient to meet the large increases in demand since deregulation, the level of the accumulated surplus does not necessarily indicate a backlog in capital spending.[6] Further, it does not actually represent a pool of funds available to finance a future acceleration in investment spending. The accumulated surplus is only an accounting measure, and as such its meaning must be carefully circumscribed.

6. Because of technical difficulties in the National Airspace System Plan program, many capital spending projects are only now at the point where significant expenditures can and are being made.

CHAPTER III

BASELINE AND ALTERNATIVE PROJECTIONS OF THE TRUST FUND

This chapter presents projections of the Airport and Airway Trust Fund under differing sets of assumptions for the 1989-1994 period. It begins with a baseline projection of Federal Aviation Administration outlays that maintains real, estimated 1989 outlays through 1994. The chapter then compares several projections of the trust fund.

Under the baseline projection, the fund's uncommitted balance declines by 1994 because of a reduction in aviation excise tax rates beginning in 1990. If this tax rate reduction is assumed not to occur, the fund's uncommitted balance grows continuously. Alternative projections of the trust fund are shown based on a capital-only or full user-pay approach to trust fund accounting. These projections are presented with and without the assumption of a tax rate reduction in the 1990-1994 period.

BASELINE PROJECTIONS

The baseline projections for the 1989-1994 period are similar to the historical patterns shown in Chapter I, with some notable exceptions. While authorizations for aviation capital spending have been substantially increased, the projected growth in spending for capital programs would not quite match these increases. As a result, aviation system users are projected to receive a 50 percent tax rate reduction on aviation excise taxes in January 1990 that is intended to reduce the accumulated surplus in the trust fund.[1] In spite of this cut in tax rates, the current accumulated surplus in the trust fund would persist through 1994 under current trust fund accounting procedures. From

1. The domestic passenger ticket tax, the cargo waybill tax, and the general aviation fuel taxes are subject to the 50 percent tax rate reduction. The international departure tax of $3 per person is not changed by this provision. For simplicity in this chapter, references to reductions in the aviation excise tax rates do not explicitly exclude the international departure tax, though they should be read as excluding it.

the standpoint of the trust fund as a capital account, this tax rate reduction would eliminate the current annual excess of tax revenue over capital spending and would, in fact, result in less tax revenue than capital outlays in the 1991-1994 period by an average of about $750 million each year. Overall, this loss would result in a general fund subsidy of $1.8 billion for the 1989-1994 period.[2] From a full user-pay perspective and, in part, because of this cut in tax rates, aviation system users would receive an $18.9 billion subsidy from general taxpayers over the next six years.

Federal Aviation Administration Outlays

Actual FAA outlays for 1988 and CBO's baseline projections of spending by major account through 1994 are presented in Table 4. These outlay projections are examined further below. Of particular note in these projections is the large proportion of total FAA spending financed by the general fund. In 1988, 45 percent of FAA spending came from the general fund and 55 percent from the trust fund; for the 1989-1994 period, these percentages are projected to average 49 percent and 51 percent respectively based on current policy. Total noncapital spending financed by the trust fund in this period would only be $3.4 billion, or 16 percent of the $20.9 billion in trust fund outlays from 1989 to 1994. Trust fund financing, hence user financing, of FAA programs would, therefore, more closely approximate a capital-only fund in this period than a full user-pay fund. From a full user-pay perspective, the average of 51 percent of FAA spending coming from the trust fund would fall well short of the full 85 percent level attributable to private-sector users of the aviation system.

The Trust Fund

The current CBO baseline projections for trust fund income, outlays, and balances are shown in Table 5. These baseline projections are strongly affected by the tax reduction provisions of the Airport and Airway Safety and Capacity Expansion Act of 1987. Absent these provisions, the recent upward trends in both the unexpended and un-

2. The total subsidy is defined here as the sum of the difference between total excise tax revenue and the appropriate user-funding share of FAA outlays for each year.

committed balances would continue uninterrupted through 1994. The projected triggering of tax rate reductions in 1990, however, would reverse these trends.

The 1987 act requires a halving of the ticket, waybill, and general aviation fuel tax rates if the total in 1988 and 1989 of the obligations for the grants-in-aid program and the appropriations for the facilities and equipment, and research, engineering, and development programs are less than 85 percent of the total authorizations for these programs in those years. Under CBO baseline projections, the tax rate reduction would occur and, therefore, the baseline projections of tax revenue for 1990 through 1994 reflect this reduction in tax rates. As a result, tax revenue peaks at $3.6 billion in 1989 and then declines

TABLE 4. BASELINE PROJECTION OF FAA OUTLAYS
(By fiscal year, in millions of dollars)

	Actual 1988	1989	1990	1991	1992	1993	1994
Operations	3,110	3,384	3,633	3,801	3,973	4,152	4,339
General fund portion	2,281	2,911	3,128	3,274	3,421	3,576	3,737
Trust fund portion	830	473	505	527	551	576	602
Headquarters Administration	38	39	39	41	42	44	46
Airport Grants-In-Aid	825	1,165	1,293	1,386	1,441	1,519	1,591
Facilities and Equipment	1,043	1,056	1,158	1,293	1,441	1,552	1,521
Research, Engineering, Development	170	169	166	171	178	186	194
Other	5	-3	-3	-3	-3	0	0
Subtotal--General Fund[a]	2,324	2,947	3,164	3,311	3,461	3,621	3,783
Subtotal--Trust Fund[b]	2,896	2,892	3,152	3,409	3,644	3,866	3,943
Total FAA[c]	5,192	5,811	6,286	6,689	7,072	7,453	7,691

SOURCE: Congressional Budget Office.

a. Includes the general fund portion of operations, headquarters administration, and other.

b. Includes the trust fund portion of operations, airport grants-in-aid, facilities and equipment, research, engineering, and development, and transfers to the National Oceanic and Atmospheric Administration to finance the aviation weather services program (not shown).

c. Total FAA excludes trust fund financing of the aviation weather services program that is included in the trust fund subtotal.

TABLE 5. BASELINE PROJECTIONS OF THE AIRPORT AND AIRWAY TRUST FUND (By fiscal year, in millions of dollars)

	Actual 1988	1989	1990	1991	1992	1993	1994
Tax Revenue During the Period							
Passenger Ticket Tax	2,815	3,178	2,388	1,854	2,008	2,119	2,348
Waybill Tax	168	183	135	102	110	117	122
Fuel Tax	117	88	55	41	43	44	45
International Departure Tax	95	112	118	122	128	134	140
Refunds	-6	-6	-4	-3	-3	-3	-3
Total, Annual Tax Revenue	3,189	3,555	2,692	2,116	2,285	2,411	2,652
Cash Outgo During the Period							
Federal Aviation Administration							
Airport grants-in-aid	825	1,165	1,293	1,386	1,441	1,519	1,591
Facilities and equipment	1,043	1,056	1,158	1,293	1,441	1,552	1,521
Research, engineering, development	170	169	166	171	178	186	194
Trust fund share of FAA operations	830	473	505	527	551	576	602
National Oceanic and Atmospheric Administration	28	29	30	31	32	34	35
Total, Annual Outlays	2,896	2,892	3,152	3,409	3,644	3,866	3,943
Net Income before Interest	293	663	-460	-1,293	-1,359	-1,455	-1,291
Interest on Investments	893	1,032	1,139	1,167	1,118	1,054	1,027
Change in Cash	1,185	1,695	679	-126	-241	-401	-264
Unexpended Balance, Start of Year	9,935	11,120	12,815	13,494	13,368	13,126	12,726
Change in Cash	1,185	1,695	679	-126	-241	-401	-264
Unexpended Balance, End of Year	11,120	12,815	13,494	13,368	13,126	12,726	12,462
Commitments Against Unexpended Balance	5,285 [a]	6,038	6,734	7,362	7,849	8,286	8,826
Uncommitted Balance, End of Year	5,835 [a]	6,777	6,760	6,006	5,277	4,440	3,636
General Fund Share of FAA Spending[b]	2,324	2,947	3,164	3,311	3,461	3,621	3,783

SOURCE: Congressional Budget Office.

a. The uncommitted balance and the commitments against the unexpended balance for 1988 are preliminary.

b. The general fund share of FAA spending is not part of the trust fund projection, but is included here for comparison with trust fund outlays.

through 1991 when it reaches a low of $2.1 billion. Tax revenue increases thereafter and reaches $2.7 billion in 1994.

The combination of reduced tax revenue and growing outlays produces a large swing in net income before interest to the trust fund. The tax rate reduction in 1990 results in a $1.1 billion decline in net income before interest, from a positive $650 million in 1989 to a negative $450 million in 1990. In the 1991-1993 period, the full-year effects of lower tax revenue produce larger net income deficits of $1.3 billion, $1.4 billion, and $1.5 billion respectively. For the 1989-1994 period, net income before interest totals -$5.2 billion.

The unexpended balance peaks in 1990, and interest income peaks in 1991. The effect of the decline in net income before interest in 1990 is more than offset by high interest earnings on the existing unexpended balance. In 1991, interest income, while at its peak, is insufficient to offset the large, negative net income before interest for the year so that the unexpended balance declines. In subsequent years, the decline in the unexpended balance reduces interest income, which, in conjunction with negative net income before interest, accelerates the decline in the unexpended balance. By 1994, the unexpended balance is $12.5 billion--$1.3 billion greater than in 1988, but $1.0 billion below its peak in 1990.

The projected trust fund uncommitted balance increases in 1989, but then begins a steady decline through 1994, the end of the projection period. From a starting point of $5.8 billion in 1988, this accumulated surplus grows to a peak of $6.8 billion in 1989, declines slightly in 1990, and drops by about $800 million a year to $3.6 billion in 1994. The uncommitted balance declines more rapidly than the unexpended balance because commitments against the trust fund balance continue to increase over the period, though by decreasing amounts. The result is a decline in the accumulated surplus of $2.2 billion by 1994, even though the unexpended balance is $1.3 billion higher than in 1988.

THE TRUST FUND WITH NO TAX RATE REDUCTION

The powerful effect of the tax rate reduction provisions on the trust fund's unexpended balance and accumulated surplus can be seen by comparing the baseline projections for the trust fund with projections for the trust fund without this tax rate reduction. Table 6 shows projections of trust fund tax revenue with no tax rate reduction, but with no other changes to the baseline. Outlays from the fund for the entire period, and all revenue, interest, and balance figures through 1989, are the same as in Table 5.

From 1990 to 1994, tax revenue climbs steadily in this case, reaching $5.2 billion. Throughout the projection period, tax revenues exceed outlays by progressively increasing amounts. The result is net income before interest in 1994 of over $1.2 billion. Since net income before interest is positive throughout the period, the unexpended balance grows continuously through 1994, and annual interest income to the fund more than doubles from its 1988 level. The combination of high net income before interest and increasing interest earnings leads to substantial yearly increases in the unexpended balance in the trust fund. In 1994, this increase, $3.1 billion, is more than total outlays from the trust fund in 1988. The result is an unexpended balance of $24.7 billion in 1994, more than twice the 1988 level.

The accumulated surplus in the trust fund follows a similar pattern, increasing rapidly over the projection period. From $5.8 billion at the end of 1988, it reaches $15.9 billion by 1994. Further, the increase in this uncommitted balance in 1994 alone is $2.6 billion, just short of total outlays from the fund in 1988. Without the tax rate reduction in 1990, therefore, the unexpended balance and accumulated surplus would each increase by more than $12 billion compared to baseline projections.

ALTERNATIVE CALCULATIONS OF TRUST FUND BALANCES

Alternative projections of the trust fund are presented below that recalculate trust fund outlays, interest, and balances based on either a capital-only or full user-pay approach to trust fund accounting. These projections more clearly illustrate the relationship between the taxes that users are projected to pay for the aviation system and the spending for which they might be charged. Both the CBO baseline

TABLE 6. PROJECTION OF THE AIRPORT AND AIRWAY TRUST FUND WITH NO TAX RATE REDUCTION
(By fiscal year, in millions of dollars)

	Actual 1988	1989	1990	1991	1992	1993	1994
Tax Revenue During the Period							
Passenger Ticket Tax	2,815	3,178	3,436	3,708	4,016	4,238	4,696
Waybill Tax	168	183	194	204	220	234	243
Fuel Tax	117	88	91	94	97	100	103
International Departure Tax	95	112	118	122	128	134	140
Refunds	-6	-6	-6	-6	-6	-6	-6
Total, Annual Tax Revenue	3,189	3,555	3,833	4,122	4,455	4,700	5,176
Cash Outgo During the Period							
Federal Aviation Administration							
Airport grants-in-aid	825	1,165	1,293	1,386	1,441	1,519	1,591
Facilities and equipment	1,043	1,056	1,158	1,293	1,441	1,552	1,521
Research, engineering, development	170	169	166	171	178	186	194
Trust fund share of FAA operations	830	473	505	527	551	576	602
National Oceanic and Atmospheric Administration	28	29	30	31	32	34	35
Total, Annual Outlays	2,896	2,892	3,152	3,409	3,644	3,866	3,943
Net Income before Interest	293	663	681	713	811	834	1,233
Interest on Investments	893	1,032	1,190	1,366	1,513	1,659	1,888
Change in Cash	1,185	1,695	1,871	2,079	2,324	2,493	3,121
Unexpended Balance, Start of Year	9,935	11,120	12,815	14,687	16,766	19,089	21,582
Change in Cash	1,185	1,695	1,871	2,079	2,324	2,493	3,121
Unexpended Balance, End of Year	11,120	12,815	14,687	16,766	19,089	21,582	24,703
Commitments Against Unexpended Balance	5,285 [a]	6,038	6,734	7,362	7,849	8,286	8,826
Uncommitted Balance, End of Year	5,835 [a]	6,777	7,953	9,404	11,240	13,296	15,877
General Fund Share of FAA Spending[b]	2,324	2,947	3,164	3,311	3,461	3,621	3,783

SOURCE: Congressional Budget Office.

a. The uncommitted balance and the commitments against the unexpended balance for 1988 are preliminary.

b. The general fund share of FAA spending is not part of the trust fund projection, but is included here for comparison with trust fund outlays.

projections and the adjusted projections with no tax rate reduction are used as bases from which both capital-only and user-pay projections are made.

The Trust Fund as a Capital-Only Account

The middle sections of Tables 7 and 8 present alternative calculations of trust fund outlays and balances that show the effect on the trust fund projections of financing only capital expenditures from the fund. Table 7 shows the case in which the tax rate reduction in 1990 occurs, and Table 8 shows projections without the tax rate reduction. The top section in Table 7 is the baseline projection from Table 5, and the top section in Table 8 is the adjusted projection from Table 6 with no tax rate reduction. The capital-only cases in each table differ from these projections by changes in trust fund outlays, interest income, the unexpended balance, and the accumulated surplus.

In Table 7, tax revenue greatly exceeds the capital-only outlays in 1989, like the effects observed in Chapter II. With the tax reduction during 1990, however, tax revenue and trust fund outlays are brought much closer together. In fact, since the tax rate reduction does not occur until the second quarter of the fiscal year, tax revenues and adjusted outlays are nearly the same in 1990. In subsequent years, the full-year effect of the reduction in tax rates leads to an excess of projected outlays over projected tax revenues, so that all capital costs are not funded by current tax revenues. The result is negative net income before interest of more than $3 billion in the 1991-1994 period. Interest income and the unexpended balance in this projection are higher than in the baseline since outlays would be less in this case. The result is that the unexpended balance reaches $16.9 billion by 1994, or $4.4 billion more than in the baseline projection. This increase in the unexpended balance is directly translated into a $4.4 billion increase in the accumulated surplus as well, since commitments against the unexpended balance would not change. The uncommitted balance therefore exceeds $8 billion by 1994.

In Table 8, the obvious effects of leaving tax rates at their current level while reducing the FAA spending financed by the trust fund are quite apparent. Net income before interest exceeds $1 billion in 1989

TABLE 7. BASELINE AND ALTERNATIVE PROJECTIONS OF TRUST FUND (By fiscal year, in millions of dollars)

	Actual 1988	1989	1990	1991	1992	1993	1994
CBO Baseline Projection							
Trust Fund Tax Revenue	3,189	3,555	2,692	2,116	2,285	2,411	2,652
Trust Fund Outlays	2,896	2,892	3,152	3,409	3,644	3,866	3,943
Net Income before Interest	293	663	-460	-1,293	-1,359	-1,455	-1,291
Interest on Investments	893	1,032	1,139	1,167	1,118	1,054	1,027
Change in Cash	1,185	1,695	679	-126	-241	-401	-264
Unexpended Balance, Start of Year	9,935	11,120	12,815	13,494	13,368	13,216	12,726
Change in Cash	1,185	1,695	679	-126	-241	-401	-264
Unexpended Balance, End of Year	11,120	12,815	13,494	13,368	13,126	12,726	12,462
Commitments Against Unexpended Balance	5,285 [a]	6,038	6,734	7,362	7,849	8,286	8,826
Uncommitted Balance, End of Year	5,835 [a]	6,777	6,760	6,006	5,277	4,440	3,636
Capital-Only Funding by Trust Fund							
Trust Fund Tax Revenue	3,189	3,555	2,692	2,116	2,285	2,411	2,652
Trust Fund Outlays	2,896	2,392	2,617	2,850	3,060	3,256	3,306
Net Income before Interest	293	1,163	75	-734	-775	-845	-654
Interest on Investments	893	1,055	1,210	1,295	1,303	1,300	1,347
Change in Cash	1,185	2,218	1,285	561	528	455	693
Unexpended Balance, Start of Year	9,935	11,120	13,338	14,623	15,184	15,712	16,167
Change in Cash	1,185	2,218	1,285	561	528	455	693
Unexpended Balance, End of Year	11,120	13,338	14,623	15,184	15,712	16,167	16,860
Commitments Against Unexpended Balance	5,285 [a]	6,038	6,734	7,363	7,851	8,289	8,829
Uncommitted Balance, End of Year	5,835 [a]	7,300	7,889	7,821	7,861	7,878	8,031
Full Funding of FAA Spending							
Trust Fund Tax Revenue	3,189	3,555	2,692	2,116	2,285	2,411	2,652
Trust Fund Outlays	2,896	4,909	5,326	5,681	6,019	6,352	6,542
Net Income before Interest	293	-1,354	-2,634	-3,565	-3,734	-3,941	-3,890
Interest on Investments	893	941	850	648	365	57	0
Change in Cash	1,185	-413	-1,784	-2,917	-3,369	-3,884	-3,890
Unexpended Balance, Start of Year	9,935	11,120	10,707	8,923	6,006	2,637	-1,247
Change in Cash	1,185	-413	-1,784	-2,917	-3,369	-3,884	-3,890
Unexpended Balance, End of Year	11,120	10,707	8,923	6,006	2,637	-1,247	-5,137
Commitments Against Unexpended Balance	5,285 [a]	6,038	6,734	7,362	7,850	8,287	8,827
Uncommitted Balance, End of Year	5,835 [a]	4,669	2,189	-1,356	-5,213	-9,534	-13,964

SOURCE: Congressional Budget Office.

a. The uncommitted balance and the commitments against the unexpended balance for 1988 are preliminary.

TABLE 8. ALTERNATIVE PROJECTIONS OF THE TRUST FUND WITH NO TAX RATE REDUCTION
(By fiscal year, in millions of dollars)

	Actual 1988	1989	1990	1991	1992	1993	1994
Projection Under Current Tax Rates							
Trust Fund Tax Revenue	3,189	3,555	3,833	4,122	4,455	4,700	5,176
Trust Fund Outlays	2,896	2,892	3,152	3,409	3,644	3,866	3,943
Net Income before Interest	293	663	681	713	811	834	1,233
Interest on Investments	893	1,032	1,190	1,366	1,513	1,659	1,888
Change in Cash	1,185	1,695	1,871	2,079	2,324	2,493	3,121
Unexpended Balance, Start of Year	9,935	11,120	12,815	14,687	16,766	19,089	21,582
Change in Cash	1,185	1,695	1,871	2,079	2,324	2,493	3,121
Unexpended Balance, End of Year	11,120	12,815	14,687	16,766	19,089	21,582	24,703
Commitments Against Unexpended Balance	5,285 [a]	6,038	6,734	7,362	7,849	8,286	8,826
Uncommitted Balance, End of Year	5,835 [a]	6,777	7,953	9,404	11,240	13,296	15,877
Capital-Only Funding by Trust Fund							
Trust Fund Tax Revenue	3,189	3,555	3,833	4,122	4,455	4,700	5,176
Trust Fund Outlays	2,896	2,392	2,617	2,850	3,060	3,256	3,306
Net Income before Interest	293	1,163	1,216	1,272	1,395	1,444	1,870
Interest on Investments	893	1,055	1,262	1,494	1,698	1,904	2,207
Change in Cash	1,185	2,218	2,478	2,766	3,093	3,348	4,077
Unexpended Balance, Start of Year	9,935	11,120	13,338	15,816	18,582	21,675	25,023
Change in Cash	1,185	2,218	2,478	2,766	3,093	3,348	4,077
Unexpended Balance, End of Year	11,120	13,338	15,816	18,582	21,675	25,023	29,101
Commitments Against Unexpended Balance	5,285 [a]	6,038	6,734	7,363	7,851	8,289	8,829
Uncommitted Balance, End of Year	5,835 [a]	7,300	9,082	11,219	13,824	16,734	20,272
Full Funding of FAA Spending							
Trust Fund Tax Revenue	3,189	3,555	3,833	4,122	4,455	4,700	5,176
Trust Fund Outlays	2,896	4,909	5,326	5,681	6,019	6,352	6,542
Net Income before Interest	293	-1,354	-1,493	-1,559	-1,564	-1,652	-1,366
Interest on Investments	893	941	901	848	760	661	589
Change in Cash	1,185	-413	-592	-711	-804	-991	-777
Unexpended Balance, Start of Year	9,935	11,120	10,707	10,116	9,404	8,600	7,609
Change in Cash	1,185	-413	-592	-711	-804	-991	-777
Unexpended Balance, End of Year	11,120	10,707	10,116	9,404	8,600	7,609	6,832
Commitments Against Unexpended Balance	5,285 [a]	6,038	6,734	7,362	7,850	8,287	8,827
Uncommitted Balance, End of Year	5,835 [a]	4,669	3,382	2,042	750	-678	-1,995

SOURCE: Congressional Budget Office.

a. The uncommitted balance and the commitments against the unexpended balance for 1988 are preliminary.

and grows continuously through 1994, reaching nearly $2 billion. When the resulting large interest earnings of the fund are included, the result is a rapidly increasing unexpended balance. By 1994, the unexpended balance reaches over $29 billion and the uncommitted balance exceeds $20 billion.

The Trust Fund as a User-Pay Account

To show the effect on the trust fund of higher levels of user support for FAA spending, alternative calculations of aviation outlays and trust fund balances similar to those in Table 3 are presented in the bottom sections of Tables 7 and 8. The full funding case differs from the baseline and adjusted projections (shown at the top of each table) by changes made to trust fund outlays, which, in turn, produce changes in the unexpended balance, interest income, and the accumulated surplus.

In Table 7, outlays exceed tax revenue from the start so that net income before interest is negative even before tax rates are reduced in 1990. However, unlike the full funding case in Table 3 above where the unexpended balance is never positive, the unexpended balance here begins at over $11 billion. Interest income is, therefore, large early in the period and positive until 1994. It thus serves to offset a portion of the deficit in current year net income before interest. Nevertheless, from 1990 to 1994 net income before interest declines from -$2.6 billion to -$3.9 billion. This large shortfall in annual net income before interest swamps interest earnings, causing the unexpended balance to drop rapidly in those years. The projected unexpended balance, therefore, peaks in 1988 at $11.1 billion and then declines continuously to -$5.1 billion at the end of 1994. The uncommitted balance declines throughout the period, falling from $5.8 billion in 1988 to -$14 billion by 1994. With full user funding, therefore, the accumulated surplus in the trust fund would be consumed by 1991 and the trust fund would end the period with unfunded commitments.

In the full funding case in Table 8, net income is again negative throughout the period as in Table 7, even though tax rates are not cut in these projections. The shortfall in net income before interest is, however, only about half what it is in Table 7. Interest income de-